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Division of Forensic Science LATENT FINGERPRINTS TRAINING MANUAL	Amendment Designator:	
	Effective Date:	16-January-2004
<p style="text-align: center;">VI LATENT PRINT DEVELOPMENT TECHNIQUES</p> <p>6.1 PURPOSE</p> <p>6.1.1 To acquaint and familiarize the student with the procedures and techniques for processing crime scenes and evidentiary items for the recovery of latent prints. The student will be required to become knowledgeable in the choice and application of latent development techniques.</p> <p>6.1.2 Although identification by non friction skin (lips and ears) prints are possible, the emphasis on this phase of training is in friction skin identification. The development techniques learned in this portion of training will normally cause both friction skin and non friction skin prints to become visible.</p> <p>6.2 OBJECTIVES</p> <p>6.2.1 The student will attain:</p> <ul style="list-style-type: none"> • Introductory knowledge concerning the quantitative parameters applied when evaluating the value of latent impressions for identification purposes. • Introductory knowledge concerning the individual characteristics and unit spatial relationships involved in comparing inked and latent impressions. • Ability to lift or preserve latent impressions on ANY surface. • Working knowledge of the different types of powders and their applications • Working knowledge of ninhydrin techniques, to include preparation of mixtures. • Working knowledge of viable applications for fuming techniques with emphasis on cyanoacrylate (super glue) processing. • Working knowledge of a variety of chemical techniques to be used in conjunction with cyanoacrylate ester. • Working knowledge of basic laser theory and alternate light sources as related to latent fingerprint excitation (fluorescence and luminescence). • Ability to process evidence for latent impressions with an alternate light source. • Knowledge of alternative processing techniques, including, but not limited to: gentian violet, amido black, small particle reagent, physical developer, silver nitrate, gun blueing and iodine fuming. • Familiarization with new latent development techniques as they become available. <p>6.3 GOAL</p> <p>6.3.1 Upon completion of this training segment the student will possess knowledge and understanding that will enable him to determine the correct procedure to be used on any evidentiary surface for latent print development. This segment establishes a basis for the proficiency and competency with the various processing techniques which will be further developed during the internship phase of training.</p>		

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<div> <p>6.4 DISCUSSION</p> <p>6.4.1 Ridge detail suitable for comparison should generally be photographed before the application of a subsequent technique. Choice of the processing procedure for a particular surface will generally be automatically known to an examiner based on experience. For porous surfaces ninhydrin is usually applied. Non-porous surfaces are generally processed with super glue or a physical technique. Special surfaces such as adhesive tape may be processed with a combination of techniques, i.e., Gentian Violet for the adhesive surface and super glue fuming for the non-adhesive surface. Many surfaces can be processed with any one of several techniques and the Forensic Scientist's choice will depend on the specific nature of the surface as he perceives it combined with his previous training and experience with similar surfaces.</p> <p>6.5 EXAMINATION</p> <p>6.5.1 Successful completion of this segment of training will be determined by three combination written and performance tests:</p> <ol style="list-style-type: none"> 1. Fuming development techniques 2. Chemical development techniques 3. Laser and alternate light source development techniques <p>6.6 REFERENCES FOR TOPIC VI</p> <ol style="list-style-type: none"> 1. <u>Fingerprints and the Law</u>, Moenssens, Chapter 2. 2. <u>Fingerprint Techniques</u>, Moenssens, Chapter 4. 3. <u>Advances in Fingerprint Technology</u>, Lee, Chapters 3,4,5. 4. <u>Friction Ridge Skin</u>, Cowger, Chapter 4. 5. <u>Modern Criminal Investigation</u>, O'Hara, Chapter 9. 6. <u>Techniques of Crime Scene Investigation</u>, Fisher, Chapter 6. 7. <u>Scott's Fingerprint Mechanics</u>, Olsen, Chapters 3 through 9. 8. <u>Scientific Police Investigation</u>, Inbau, et al., Chapter 1. 9. <u>Practical Fingerprinting</u>, Bridges, Chapters 10 through 15. 10. <u>The Science of Fingerprints</u>, FBI, Chapters 13 through 15. 11. <u>Forensic Science: An Introduction to Criminalistics</u>, DeForest, Pgs. 341-349. 12. <u>Fundamentals of Criminal Investigation</u>, O'Hara and O'Hara, Chapter 32. 13. <u>Fingerprint Detection With Lasers</u>, Menzel, Chapters 1, 3, 4 and 5. </div>		

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<p>14. <u>Applications of the Laser</u>, Goldman, Chapters 1, 12, 13 and Appendix.</p> <p>15. <u>Fingerprint Detection Techniques</u>, Margot & Lennard.</p> <p>16. <u>Handbook of Lasers</u>, Chapters 1, 4 and 7.</p> <p>17. <u>Criminalistics: An Introduction to Forensic Science</u>, Saferstein, Pgs. 450-463.</p> <p>18. Topic VI Latent Print Section Reference Article File.</p>		